

WHAT IS CLAIMED IS:

1. A system to facilitate data transfer between a server and a client, comprising:

at least one server network to communicate data via a first Input/Output (I/O) architecture;

5 at least two Virtual Network Interface Cards (VNICs) to communicate the data via the first I/O architecture;

a client network to communicate data via a second I/O architecture;

at least two bridging devices to convert packets useable in the first I/O architecture to packets useable in the second I/O architecture, wherein no more than one of the at least two bridging devices transfers the data with any one of the at least two VNICs, and the at least two bridging devices transfer the data with the client network; and

at least one intermediate driver to bind to the at least one server network and to the at least two VNICs, wherein the at least one intermediate driver provides a fail-over function to maintain a connection between the server network and the client network.

15 2. The system of claim 1, wherein the first I/O architecture is an Infiniband architecture.

3. The system of claim 1, wherein the second I/O architecture is an Ethernet architecture.

4. The system of claim 1, wherein the at least one intermediate driver provides at least one of: Internet Protocol Security (IPSec), and Virtual Local Area Network (VLAN) protocol.

5. The system of claim 1, wherein the at least one intermediate driver binds to the at least one server network via at least one miniport instance.

6. The system of claim 1, wherein the client network includes at least one switch utilizing the second I/O architecture.

7. The system of claim 1, wherein when an error occurs during data transfer between the one of the at least two bridging devices and the switching device, an error message is sent to one of the at least two VNICs corresponding to the one of the at least two bridging devices having the error.

8. The system of claim 7, wherein the fail-over function terminates a connection between the one of the at least two bridging devices having the error and the one of the at least two VNICs corresponding to the one of the at least two bridging devices having the error, and initiates a connection between an alternative one of the at least two bridging devices and an alternative one of the at least two VNICs.

9. A method to facilitate data transfer between a server and a client, comprising:  
communicating data with at least one server network via a first Input/Output (I/O) architecture;

communicating the data with at least two Virtual Network Interface Cards (VNICs) via the first I/O architecture;

converting packets of the data useable in the first I/O architecture to packets of the data useable in a second I/O architecture through use of at least two bridging devices, wherein no more than one of the at least two bridging devices transfers the data with any one of the at least two VNICs, and the at least two bridging devices transfer the data to a client network utilizing the second I/O architecture; and

binding at least one intermediate driver to the at least one server network and to the at least two VNICs, wherein the at least one intermediate driver provides a fail-over function to

maintain a connection between the server network and the client network when an error occurs during transfer of the data between one of the at least two bridging devices and the client network.

10. The method of claim 9, wherein the first I/O architecture is an Infiniband architecture.

11. The method of claim 9, wherein the second I/O architecture is an Ethernet architecture.

12. The method of claim 9, wherein the intermediate driver provides at least one of: Internet Protocol Security (IPSec) and Virtual Local Area Network (VLAN) protocol.

13. The method of claim 12, further including binding the at least intermediate driver to the at least one VLAN via at least one miniport instance.

14. The method of claim 9, further including sending an error message to one of the at least two VNICs corresponding to the one of the at least two bridging devices having the error when an error occurs during data transfer between one of the at least two bridging devices and the client network.

15. The method of claim 14, wherein the fail-over function terminates a connection between the one of the at least two bridging devices having the error and the one of the at least two VNICs corresponding to the one of the at least two bridging devices having the error, and initiates a connection between an alternative one of the at least two bridging devices and an alternative one of the at least two VNICs.

16. The method of claim 9, wherein the client network includes at least one switch utilizing the second I/O architecture.

17. A program code storage device, comprising:  
a computer-readable medium; and  
computer-readable program code, stored on the computer-readable medium, having  
instructions to

5           communicate data with at least one server network via a first Input/Output (I/O)  
architecture,

          communicate the data with at least two Virtual Network Interface Cards (VNICs)  
via the first I/O architecture,

          convert packets of the data useable in the first I/O architecture to packets of the  
data useable in a second I/O architecture through use of at least two bridging devices,  
10           wherein no more than one of the at least two bridging devices transfers the data with any  
one of the at least two VNICs, and the at least two bridging devices transfer the data to a  
client network utilizing the second I/O architecture, and

          bind at least one intermediate driver to the at least one server network and to the  
15           at least two VNICs, wherein the at least one intermediate driver provides a fail-over  
function to maintain a connection between the server network and the client network.

18. The program code storage device of claim 17, wherein the first I/O architecture is  
an Infiniband architecture.

19. The program code storage device of claim 17, wherein the second I/O architecture  
20   is an Ethernet architecture.

20. The program code storage device of claim 17, wherein the at least one  
intermediate driver provides at least one of: Internet Protocol Security (IPSec) and Virtual Local  
Area Network (VLAN) protocol.

21. The program code storage device of claim 17, wherein the computer-readable program code further includes instructions to binds the at least one intermediate driver to the at least one VLAN via at least one miniport instance.

22. The program code storage device of claim 17, wherein the computer-readable  
5 program code further includes instructions to send an error message to one of the at least two VNICs corresponding to the one of the at least two bridging devices having an error during data transfer between one of the at least two bridging devices and the switching device.

23. The program code storage device of claim 17, wherein the “fail-over” feature  
terminates a connection between the one of the at least two bridging devices having the error and  
10 the one of the at least two VNICs corresponding to the one of the at least two bridging devices having the error, and initiates a connection between an alternative one of the at least two bridging devices and an alternative one of the at least two VNICs.

24. The program code storage device of claim 17, wherein the client network includes  
at least one switch utilizing the second I/O architecture.